



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor application of
Heung-bae LEE

Appln. No.: 09/738,900

Confirmation No. NOT YET ASSIGNED

Group Art Unit: NOT YET ASSIGNED

Filed: December 18, 2000

Examiner: NOT YET ASSIGNED

For: DIRECT-CONVERSION DEMODULATOR HAVING AUTOMATIC-GAIN-CONTROL
FUNCTION

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE CLAIMS:

Please enter the following amended claims:

1. (Amended) A direct-conversion demodulator in a RF reception system for radio communication comprising:
- a down mixer for mixing a received RF signal and carrier signals, and thereby converting the RF signal into baseband signals of channels I and Q;
 - a filter for filtering high-frequency components of the baseband signals of the two channels output from the down mixer;
 - a detector for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level;

an AGC for controlling gains of the baseband signals for each of the two channels output from the down mixer according to the gain control level detected by the detector;

a differentiator for differentiating the baseband signals of the two channels output from the filter;

a multiplier for cross multiplying the baseband signals of the two channels output from the differentiator and the baseband signals of the two channels output from the filter; and

an adder for adding the baseband signals of the two channels output by the multiplier and thereby detecting data.

Please add the following new claim:

3. An RF reception system for radio communication comprising:

an RF receiver for receiving an RF signal;

a down mixer for mixing the received RF signal and carrier signals, and thereby converting the received RF signal into baseband signals of channels I and Q;

a filter for filtering high-frequency components of the baseband signals of the two channels output from the down mixer;

a detector for detecting a gain control level corresponding to the difference obtained by comparing levels of the baseband signals of the two channels output by the filter with a predetermined level;

an AGC for controlling gains of the baseband signals for each of the two channels output from the down mixer according to the gain control level detected by the detector;

a differentiator for differentiating the baseband signals of the two channels output from the filter;

a multiplier for cross multiplying the baseband signals of the two channels output from the differentiator and the baseband signals of the two channels output from the filter; and

an adder for adding the baseband signals of the two channels output by the multiplier and thereby detecting data.

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PRELIMINARY AMENDMENT
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REMARKS

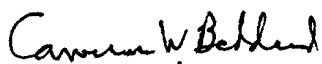
Entry and consideration of this Amendment is respectfully requested.

The above amendment to claim 1 is made to place the claims in even better condition for initial examination. Claim 3 is added to more fully define the invention. The Examiner is respectfully requested to enter the above amendments prior to examining the application.

If the Examiner feels that the disposition of the application could be expedited by speaking with Applicant's representative, the Examiner is respectfully invited to call the undersigned attorney at the number shown below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,


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